

such as Winsock sockets and Winsock.dll. The communication is then conveyed via the socket to the programs 202, and the application performed by the programs 202 is run in a step 308.

If, on the other hand, the communication is determined by the hooking layer 206 to be non-standard protocols, such as optimized wireless protocols of the related patent applications or others, then the hooking layer 206 invokes appropriate non-standard DLLs and acts as an invisible proxy in a step 312. As an invisible proxy in the step 312, the hooking layer 206 serves to interact with the received communication and the programs 202 by providing the information of the communication to the programs in form acceptable to the programs 202. In acting as an invisible proxy, the hooking layer 206 sets up a non-standard socket (i.e., Sockhook) and uses the non-standard DLLs (i.e., Sockhook.dll). In effect, the hooking layer 206 in the step 312 receives the communication information in the form of the non-standard protocols, such as of the wireless portion of the network 100, and manipulates the information to the form of the standard protocols of the network 100, such as TCP/IP. The hooking layer 206, acting as invisible proxy in the step 312, provides the communicated information to the programs 202 for a step 308 of running the programs 202 using the information in acceptable form to the programs 202.

In transmission communications of the wireless device 200, the substantial reverse of the method 300 occurs. The application is run in a step 308, and the result is delivered to the hooking layer 206. At the hooking layer 206, the hooking layer 206 again serves as an invisible proxy in a step 312, although this time the hooking layer 206 manipulates the information from a standard protocol form to the non-standard protocols.

The hooking layer 206 invokes the specialized socket and specialized DLLs for the manipulation, in the steps 304, 310, 312. The wireless device 200 then transmits in a step 302 the information, formatted according to the specialized protocols, for example, the optimized wireless protocols. These specialized protocols are, thus, employed over the wireless portion of the network 100 in communications both ways between the wireless device 200 and the wireless ASP server computer 106.

In operation of the systems 100, 200 and the method 300, numerous alternative business and technical arrangements are possible. Of course, the wireless ASP server computer 16 must be capable of communicating via typical network protocols with other network connected devices in order to receive and deliver messages from and to those network connected devices, and then transfer those messages on or receive those messages from the wireless device 20, as appropriate. Moreover, although only particular devices of a communications network and its nodes are herein described and discussed, particularly, primarily the wireless device 200 and the wireless ASP server computer 106, the wired device 240 and the network 100, such as the Internet, have been described with regard to the embodiments, it is to be expressly understood that combinations of those elements, such as a plurality of any, certain ones, all of those elements, and even additional or alternative elements, is possible in keeping with the scope of the embodiments herein.

The network could be an intranet, or even an intranet combination or intranet-extranet combination. Numerous banks of the wireless ASP server computer 16 can be possible for receiving communications from pluralities of wireless devices, and the wireless ASP server computers can be centrally located or distributed through a wide

geographic area. In the case of a global network such as the Internet, the network is capable of communicating by its protocols, which may include other specialized protocols for specific situations.

The wireless ASP server computer in such instance can communicate with various devices on the network according to those other specialized protocols, if properly equipped as would be known to those skilled in the art. In general, the communications between the wireless device or devices and the wireless ASP server computer or computers occurs according to optimized protocols for wireless communications. These optimized protocols can be implemented entirely in software or alternatively can be hardware, combinations of hardware and software, or other mechanisms. The protocols of the hardware or software, as the case may be, for the wireless communications will, in any event, provide increased communications efficiency, speed, and adaptation for the wireless environment.

In the foregoing specification, the invention has been described with reference to specific embodiments. However, one of ordinary skill in the art appreciates that various modifications and changes can be made without departing from the scope of the present invention as set forth in the claims below. Accordingly, the specification and figures are to be regarded in an illustrative rather than a restrictive sense, and all such modifications are intended to be included within the scope of the present invention.

Benefits, other advantages, and solutions to problems have been described above with regard to specific embodiments. However, the benefits, advantages, solutions to problems and any element(s) that may cause any benefit, advantage, or solution to occur or become more pronounced are not to be construed as a critical, required, or essential